

REMARKS

Claims 5 through 11 and 17 through 19 are pending in this application. In response to the final Office Action dated September 22, 2006, favorable reconsideration in light of the following comments is respectfully solicited. Claim 19 is amended herein to correct an obvious error.

Claim 5 is amended to replace the word "soft" with "stretchable" to more accurately reflect the invention. No new matter has been introduced.

Claims 5 through 11 and 17 through 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Furukawa, of record. Reconsideration and withdrawal of the rejection is respectfully solicited.

Independent claim 5 requires the following:

A method of cleaning an optical fiber comprising:
 disposing a cleaning member on an optical fiber moving path, wherein the cleaning member is a mesh member of a stretchable and flexible fiber sheet formed by knitting fiber threads and the fiber sheet satisfies the relation $F \geq 0.01 \text{ (mm)}$ and $G \leq 0.8 \times D$ in which D denotes the outer diameter of the optical fiber, G denotes the mesh size of the fiber thread and F denotes the diameter of the fiber thread,
 bringing a surface of the moving optical fiber into a physical contact with the cleaning member for cleaning the surface of the moving optical fiber, and
 inserting the optical fiber into an interstice of the fiber sheet.

In contrast, Furukawa does not disclose or suggest the claimed requirement $G \leq 0.8 \times D$. The dust removal machine 20 in Furukawa may be considered to correspond to the cleaning unit 10 of the invention in the present application. The porous body 21 and the supporter 22 of Furukawa would correspond to cleaning member 11 in the present application. The base material 23 corresponds to the holding frame 12 in the present application.

Paragraph 27 of Furukawa describes a mesh configuration that can be used as the supporter 22. For example, there is disclosed a metal mesh formed so that one side of opening might be set to 0.4 mm ϕ with the stainless steel thin line of 1.2 mm ϕ . Since a mesh wire diameter F is 1.2 mm, a mesh interval G is 0.4 mm and an outer diameter of a covering optical fiber is 0.25 mm (paragraph 20), G is larger than D ($G > D$). The disclosed parameters thus do not meet the claimed requirement of $G \leq 0.8 \times D$, nor is there any teaching therein for modification.

In Furukawa, the supporter 22 removes larger-sized particles of dust and dirt and the porous body 21 (such as, for example, plastic sponge, foam plastic, felt) removes remaining particles of dust and dirt. The cleaning member (mesh) 11 used in the device of the present invention is a single member of “stretchable and flexible sheet” having the above-described size, which can remove dust and dirt with no fear of damaging the optical fiber. Therefore, the method recited in claim 5 and its dependent claims 6 through 11 are patentably distinguishable from the device of Furukawa.

Independent claim 17 requires apparatus wherein a contact portion of the cleaning member is movable in a direction perpendicular to the longitudinal moving path by the movement of the optical fiber.

Furukawa, at paragraph 31, states that “...by having made the porous body and the supporting member movable, the abnormalities in tension...can be prevented.” However, it is unclear how the porous body and the supporting member can be moved since no embodiment is described in Furukawa. In the last sentence of the paragraph 31, it is stated that “the abnormalities in tension can be prevented by the wiring location of the optical fiber separating from a core.” Paragraph 18 of Furukawa further states that “it has the role which prevents that

the base material 23 moves the porous body 21 and the supporter 22 in the migration direction of the optical fiber according to the wiring force of the optical fiber.”

From the above descriptions, it can be considered that the porous body 21 and the supporter 22 are movable to be adjusted so that the optical fiber can pass along the center line of the predetermined wiring route. However, if the porous body 21 and the supporter 22 are allowed to move during the optical fiber runs, the wiring location of the optical fiber may deviate from the center line. Such an occurrence conflicts with the above descriptions of the document. The movement in the running direction of the optical fiber is prevented by the base material 23.

In contrast to Furukawa, the claimed invention provides that the cleaning member (11) moves while the optical fiber runs. In other words, the claimed invention requires movement of the cleaning unit by the movement of the optical fiber. As there is no such disclosure or teaching in Furukawa, it is submitted that claim 17 and its dependent claims are patentably distinguishable.

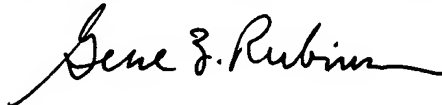
Accordingly, entry of the Amendment, withdrawal of the rejection, and allowance of the application are respectfully solicited. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection

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with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

A handwritten signature in black ink, appearing to read "Gene Z. Robinson". The signature is fluid and cursive, with a long horizontal stroke at the end.

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